

REMARKS

Reconsideration is respectfully requested.

In view of the fact that this Office Action was not accompanied by a "Notice of Draftsperson's Patent Drawing Review" (PTO-948), and form PTO-326 made no indication that such Notice was forthcoming, it is presumed by the Applicant that the drawings submitted with the above-identified application have received favorable treatment and are allowable as originally submitted.

35 USC §102

The Examiner has rejected Claims 6, 9-14, and 20-21 under 35 USC §102, as allegedly being anticipated by MacAulay et al. (US 5,590,660).

Claim 6: Applicant has amended Claim 6 to even more clearly distinguish Applicant's invention from the prior art references. The MacAulay reference does not teach use of a fluorescence endoscope system utilizing black and white CCDs. The CCDs disclosed in MacAulay are color CCDs (MacAulay, column 8, lines 29-31, "Camera 34 sends the red remittance image via its red channel and the blue remittance via its blue channel to display 40"). There are advantages to using black and white CCDs over color CCDs. Color CCDs tend to be larger and bulkier (and more painful for a patient when inserted inside the body). Further, Applicant's fluorescence system can be adapted to be used with many existing white light endoscope systems already in use which have black and white CCDs. Thus, it is respectfully submitted that rejection of Claim 6 (and all Claims dependent thereon) should be withdrawn.

Claim 9: Applicant has amended Claim 9 to even more clearly distinguish Applicant's invention from the prior art references. Applicant's endoscope system can utilize green remittance light to produce a background image. MacAulay captures green fluorescence with the green channel of a color CCD and cannot therefore use green remittance light to produce a background image since it would wash out the fluorescence image. (MacAulay, column 7, lines 49-50, "The foregoing embodiments of the present invention employ blue excitation light and red illumination light") and (MacAulay, column 8, lines 31-33, "The green integrated autofluorescence image is captured by camera 36 and sent to the green channel of the display.") and particularly (MacAulay, column 5, lines 18-26, "The non-excitation light is preferably far red to infrared light ... This non-excitation light is preferred since it falls outside the relatively broad spectral range of generally green emitted autofluorescence light ... so as not to interfere with detection of the relatively faint autofluorescence image."). Thus, it is respectfully submitted that rejection of Claim 9 (and all Claims dependent thereon) should be withdrawn.

Claim 10: Claim 10 depends from claim 9 and should now be allowable together with Claim 9.

Claims 11 and 12: Applicant has amended Claims 11 and 12 to even more clearly distinguish Applicant's invention from the prior art references. As mentioned above, MacAulay's device sends the fluorescent image to the green channel. Since Applicant sends the fluorescent image to

the blue channel, remittance light can be sent to the green channel to generate a more robust background image. Thus, it is respectfully submitted that rejection of Claims 11 and 12 (and all Claims dependent thereon) should be withdrawn.

Claims 13 and 14: Applicant has amended Claims 13 and 14 to even more clearly distinguish Applicants invention from the prior art references. MacAulay does not teach using a color CCD with a color channel sensitive to a limited range of wavelengths in order to differentiate between excitation and non-excitation light. MacAulay uses filters and dichroic mirrors to separate excitation and non-excitation light, and to distinguish between remittance light and fluorescent light. Applicant's invention can separate and collect the fluorescent non-excitation light and exclude the excitation light without the need for dichroic mirrors or excitation light filters. A major advantage of eliminating the need for filters (that block excitation light) is that the same endoscope can be used for both white light and fluorescent endoscopy without the need to remove the endoscope from the patient (to remove the filter). Filters that exclude excitation light prevent white light endoscopy. Thus, it is respectfully submitted that rejection of Claims 13 and 14 (and all Claims dependent thereon) should be withdrawn.

Claims 20: The Examiner has stated "MacAulay et al. teaches the use of three different channels..." Applicant respectfully submits that "using three different channels" does not anticipate Applicant's Claim 20.

The courts have ruled that "A claim is anticipated only if each and every element as set forth in the claim is found, either expressly or inherently described, in a single prior art reference." *Verdegaal Bros. v. Union Oil Co. of California*, 814 F.2d 628, 631, 2 USPQ2d 1051, 1053 (Fed. Cir. 1987). Also, "The identical invention must be shown in as complete detail as is contained in the ... claim." *Richardson v. Suzuki Motor Co.*, 868 F.2d 1226, 1236, 9 USPQ2d 1913, 1920 (Fed. Cir. 1989).

Applicant respectfully submits that the Examiner has failed to establish a prima facie case of anticipation under 35 USC §102 since the MacAulay reference does not teach each and every element of Applicants Claim 20.

Specifically, the MacAulay reference does not teach

- a) at least one light emitting system, structured and arranged to illuminate the subject matter, comprising,
 - i) at least one source of white light,
 - ii) at least one blue filter structured and arranged to permit transmission of essentially only excitation light,
 - iii) at least one green filter structured and arranged to permit transmission of non-excitation light, and
 - iv) at least one red filter structured and arranged to permit transmission of non-excitation light;

In fact, MacAulay does not teach any filters for a light emitting system.

Further, MacAulay does not teach

- b) at least one alternating system structured and arranged to alternate use of said at least one blue filter, said at least one green filter, and said at least one red filter, wherein
 - i) for at least one first period of time, said at least one alternating system is structured and arranged to illuminate the subject matter essentially only by light filtered by said at least one blue filter,
 - ii) for at least one second period of time, said at least one alternating system is structured and arranged to illuminate the subject matter essentially only by light filtered by said at least one green filter, and
 - iii) for at least one third period of time, said at least one alternating system is structured and arranged to illuminate the subject matter essentially only by light filtered by said at least one red filter;

Applicant respectfully submits that MacAulay doesn't teach **three periods** of time, each with a different kind of illumination.

Thus, it is respectfully submitted that rejection of Claims 20 and 21 (and all Claims dependent thereon) should be withdrawn.

Applicant believes that all Claims, as amended, are now allowable with respect to 35 USC §102 and respectfully request that all such rejections be withdrawn.

35 USC §103

The Examiner has rejected Claim 7 and Claim 8 under 35 USC §103, as allegedly being unpatentable over MacAulay et al. (US 5,590,660)

The Federal Circuit has enunciated several guidelines in making a §103 obviousness determination. A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art. *In re Bell*, 991 F.2d 781, 783, 26 USPQ2d 1529, 1531 (Fed Cir. 1993) (quoting *In re Rinehart*, 531 F.2d 1048, 1051 (CCPA 1976)). (Emphasis added). For the Examiner to establish a prima facie case of obviousness, the Examiner must contend that the teachings from the prior art *itself* or that knowledge generally available to one of ordinary skill in the art would appear to suggest the claimed subject matter to a person of ordinary skill in the art.

Applicant repeats as though fully set forth here the above arguments.

Further, it is improper for the Examiner to make a rejection based on a alleged "alternative functional equivalent" contained within a reference. Even further, Applicant argues that the teachings of MacAulay are in fact, NOT equivalent to Applicant's claim elements, and result in different end results. The primary function of Applicant's adjuster filter is to manage the ratio of

intensity between the florescent image and the remittance image, which is NOT equivalent to what MacAulay teaches.

Applicant respectfully submits that the Examiner has failed to establish a prima facie case of obviousness under 35 USC §103 since the MacAulay reference does not teach use of an adjuster filter to adjust the intensity of excitation light nor an adjuster filter to adjust the intensity of non-excitation light. Nor has the Examiner provided any evidence of why, given the teachings of MacAulay, it would have been obvious to do so. Thus, it is respectfully submitted that rejection of Claims 7 and 8 (and all Claims dependent thereon) should be withdrawn.

The Examiner has rejected Claims 15-19 and 22-25 under 35 USC §103, as allegedly being unpatentable over MacAulay et al. (US 5,590,660) in view of Alfano (US 6,665,556).

Alfano is not a proper reference since Applicant's priority date, March 17, 1999, predates the Alfano reference. Thus, it is respectfully submitted that rejection of Claims 15-19 and 22-25 (and all Claims dependent thereon) should be withdrawn.

Further, it is improper for the Examiner to make a rejection based on a alleged "alternative functional equivalent" contained within a reference. Applicant argues that the teachings of MacAulay are in fact, NOT equivalent to Applicant's claim elements, and result in different end results. The primary function of Applicant's adjuster filter is to manage the ratio of intensity between the florescent image and the remittance image, which is NOT equivalent to what MacAulay teaches..

Applicant respectfully submits that the Examiner has failed to establish a prima facie case of obviousness under 35 USC §103 since the MacAulay reference does not teach use of an adjuster filter to adjust the intensity of excitation light nor an adjuster filter to adjust the intensity of non-excitation light. Nor has the Examiner provided any evidence of why, given the teachings of MacAulay, it would have been obvious to do so. Thus, it is respectfully submitted that rejection of Claim 25 should be withdrawn.

Applicant believes that all Claims, as amended, are allowable with respect to 35 USC §103, and respectfully request that all such rejections be withdrawn.

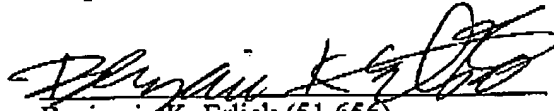
Applicant's Claims, as presently amended, are not taught or suggested by MacAulay, nor any other of the cited references; and Applicant respectfully submits that all remaining Claims should be in condition for allowance.

If there are any fees incurred by this Amendment Letter, please deduct them from our Deposit Account NO. 50-1887.

Applicant also respectfully requests (not as a matter of form but as a special request in this case) that the Examiner, after having an opportunity to review this paper, grant a telephonic interview to Applicant's undersigned agent in order to discuss the application, the office action and this paper, to attempt to place this application in condition for allowance. Applicant's agent will contact the Examiner to collaborate on scheduling an appropriate time.

Respectfully submitted,

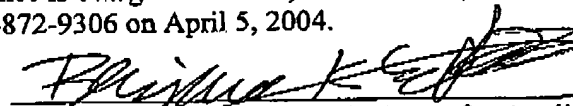
Date: April 5, 2004


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CERTIFICATE OF FACSIMILE TRANSMISSION

I hereby certify that this correspondence is being transmitted, via facsimile, to the Patent and Trademark Office fax number (703)-872-9306 on April 5, 2004.

Date of Sig. 4/5/2004 Signature:


Benjamin K. Erlick (51,656), Agent for Applicant